

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776644

Luminaire Tested: HCDJBS4050CSD-HCD4TSQMW-5000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776644
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD4TSQMW-5000lm-5000K
Description: 4 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

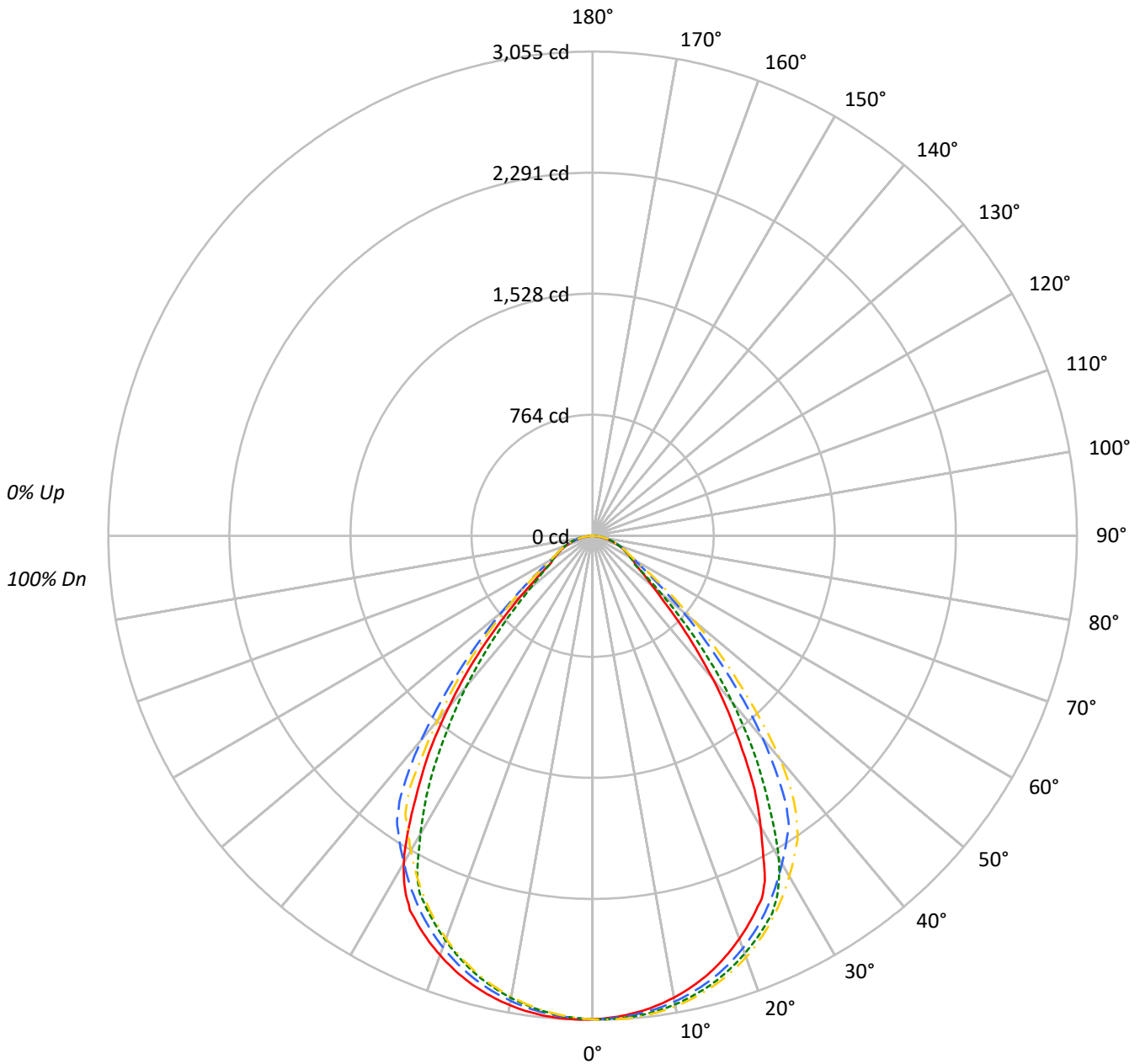
Lumens per Lamp: N/A
Luminaire Lumens: 5044.7 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.13 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89				
2	104	97	92	88	101	96	91	86	92	88	85	89	86	83	86	83	81	79				79				
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70				70				
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63				63				
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	58	57				57				
6	79	67	60	55	77	67	59	54	65	59	54	63	58	53	62	57	53	51				51				
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47				47				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43				43				
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39				39				
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	41	38	36				36				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	301508	301508	301508	301508
5°	299921	301985	302283	300060
10°	296956	301342	301874	297247
15°	292078	299179	300029	292620
20°	284601	295077	296150	285674
25°	275497	289424	290275	276610
30°	241928	267859	271854	247920
35°	198480	224495	229358	206034
40°	152229	177028	182357	159738
45°	107019	128475	133633	113952
50°	75702	86004	90402	78393
55°	59901	59160	62658	61159
60°	56142	54423	55371	56044
65°	52904	52226	52576	54167
70°	48840	50083	49534	52482
75°	43956	47470	45598	50601
80°	34836	43943	39503	47529
85°	17125	35837	23702	41848

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 180727 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.0	5.7
10°-20°	814.8	16.2
20°-30°	1187.7	23.5
30°-40°	1194.6	23.7
40°-50°	783.2	15.5
50°-60°	379.5	7.5
60°-70°	230.7	4.6
70°-80°	132.8	2.6
80°-90°	33.3	0.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2290.5	45.4
0°-40°	3485.1	69.1
0°-60°	4647.8	92.1
0°-90°	5044.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5044.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3050	3050	3050	3050	3050	
5°	3023	3044	3047	3024	3023	287
15°	2854	2924	2932	2860	2854	803
25°	2526	2654	2662	2536	2526	1138
35°	1645	1860	1901	1708	1645	1026
45°	766	919	956	815	766	603
55°	348	343	364	355	348	325
65°	226	223	225	232	226	224
75°	115	124	119	132	115	121
85°	15	32	21	37	15	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4
0.5°	3050.0	3049.0	3049.5	3049.5	3051.4	3051.9	3052.9	3053.4	3052.4	3050.4	3049.0
1°	3048.5	3047.5	3049.0	3050.0	3051.9	3052.9	3053.8	3054.3	3052.9	3050.4	3048.5
1.5°	3046.1	3046.1	3048.5	3050.0	3051.9	3053.4	3054.8	3054.8	3053.4	3050.4	3047.5
2°	3043.6	3044.1	3047.5	3050.0	3051.9	3053.4	3054.8	3054.8	3053.4	3050.0	3046.1
2.5°	3041.2	3042.2	3046.1	3049.0	3051.4	3053.4	3054.8	3054.8	3053.4	3049.5	3044.6
3°	3037.8	3039.3	3044.1	3048.0	3050.0	3052.9	3054.3	3054.8	3052.4	3048.5	3042.7
3.5°	3034.9	3036.4	3042.2	3047.0	3049.0	3051.9	3053.8	3053.8	3051.4	3047.0	3040.2
4°	3031.5	3033.4	3039.8	3045.6	3047.5	3050.9	3052.9	3053.4	3050.4	3045.1	3038.3
4.5°	3027.1	3029.6	3036.8	3043.6	3046.1	3049.0	3051.9	3051.9	3049.0	3043.2	3035.4
5°	3022.8	3025.7	3033.4	3041.2	3043.6	3047.5	3050.0	3050.0	3046.6	3040.7	3031.5
5.5°	3018.4	3021.3	3030.1	3038.8	3041.2	3045.1	3048.0	3048.0	3044.6	3038.3	3028.1
6°	3013.5	3016.9	3026.7	3035.9	3038.3	3042.2	3045.6	3045.6	3041.7	3034.9	3024.2
6.5°	3008.2	3012.1	3022.8	3033.0	3034.9	3039.8	3042.7	3042.7	3038.3	3031.5	3019.9
7°	3001.9	3006.3	3018.4	3029.6	3031.0	3036.4	3039.8	3039.8	3035.4	3028.1	3015.0
7.5°	2995.6	3000.4	3013.5	3025.7	3027.1	3033.0	3036.4	3035.9	3031.5	3023.7	3010.1
8°	2989.3	2994.6	3007.7	3021.3	3022.8	3029.1	3032.5	3032.0	3027.6	3019.4	3004.8
8.5°	2982.0	2987.3	3002.9	3016.9	3018.4	3024.7	3028.1	3028.1	3023.3	3014.5	2999.0
9°	2974.7	2980.5	2997.0	3012.1	3013.5	3020.3	3023.7	3023.7	3018.4	3009.7	2993.2
9.5°	2966.9	2973.2	2990.7	3006.3	3008.2	3015.5	3018.9	3018.4	3013.1	3003.8	2986.8
10°	2958.7	2966.0	2983.9	3000.9	3002.4	3009.7	3014.0	3013.5	3007.7	2998.0	2980.0
10.5°	2949.9	2957.7	2977.1	2994.6	2996.1	3003.8	3008.2	3007.7	3001.9	2992.2	2972.8
11°	2941.2	2949.0	2969.8	2988.3	2989.8	2997.5	3002.4	3001.9	2996.1	2985.4	2965.0
11.5°	2932.0	2940.2	2962.1	2981.5	2982.5	2991.2	2996.1	2995.1	2989.3	2978.6	2957.2
12°	2921.8	2931.0	2953.8	2974.2	2975.2	2984.9	2989.8	2988.3	2982.0	2971.3	2949.0
12.5°	2911.6	2921.3	2945.1	2966.4	2967.4	2977.6	2982.5	2981.0	2974.7	2963.5	2940.2
13°	2900.9	2911.6	2936.3	2959.2	2959.7	2969.4	2975.2	2973.7	2966.9	2955.8	2931.5
13.5°	2890.2	2900.9	2927.6	2950.4	2951.4	2962.1	2967.4	2965.5	2958.7	2947.0	2921.8
14°	2879.1	2889.7	2917.4	2942.2	2942.7	2953.3	2959.2	2957.2	2949.9	2937.8	2912.1
14.5°	2866.9	2878.1	2907.7	2932.9	2933.4	2944.1	2950.4	2949.0	2941.2	2928.6	2901.9
15°	2854.3	2866.4	2897.0	2923.7	2923.7	2935.4	2941.7	2939.3	2932.0	2919.4	2891.2
15.5°	2841.2	2854.3	2886.3	2914.0	2914.0	2926.2	2932.5	2930.0	2921.8	2909.2	2880.0
16°	2828.1	2841.7	2874.7	2903.8	2903.3	2915.5	2922.8	2919.8	2911.6	2899.0	2868.9
16.5°	2814.0	2828.6	2863.0	2892.7	2892.2	2905.3	2912.6	2909.6	2900.9	2887.8	2856.7
17°	2799.9	2815.0	2851.4	2882.0	2881.0	2894.1	2901.9	2899.4	2890.2	2876.6	2844.6
17.5°	2784.9	2800.9	2838.8	2870.8	2869.3	2883.4	2890.7	2888.3	2878.1	2865.0	2832.0
18°	2770.3	2786.8	2825.7	2858.7	2857.2	2871.8	2879.1	2876.1	2865.9	2852.8	2818.9
18.5°	2754.3	2771.3	2812.5	2846.5	2845.1	2859.2	2867.4	2864.0	2854.3	2840.7	2805.3
19°	2738.7	2756.2	2798.5	2834.4	2832.0	2846.0	2855.3	2851.4	2841.7	2827.6	2791.7
19.5°	2722.2	2740.2	2784.4	2820.8	2818.9	2834.4	2842.6	2838.3	2829.1	2814.0	2777.6
20°	2705.7	2724.7	2769.8	2807.2	2805.3	2820.3	2829.1	2825.7	2815.5	2800.4	2762.5
20.5°	2689.2	2708.2	2754.3	2793.1	2791.2	2806.7	2815.9	2811.6	2801.4	2786.3	2747.0
21°	2672.2	2691.2	2738.7	2779.0	2776.6	2792.6	2801.9	2797.5	2787.3	2772.2	2731.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2617.9	2638.7	2689.7	2733.4	2732.4	2748.5	2757.2	2753.8	2743.1	2726.6	2682.9
23°	2599.4	2620.8	2671.7	2718.4	2716.4	2732.9	2741.7	2738.3	2727.6	2710.6	2665.4
23.5°	2581.0	2601.8	2653.8	2702.3	2700.4	2717.4	2725.6	2722.2	2712.5	2694.1	2647.5
24°	2561.1	2582.9	2635.8	2685.8	2684.4	2701.4	2709.1	2706.2	2696.5	2677.6	2629.5
24.5°	2544.1	2564.4	2617.4	2669.3	2667.9	2684.9	2691.7	2689.7	2679.5	2661.1	2611.1
25°	2526.1	2545.0	2597.9	2651.8	2653.8	2668.3	2674.2	2672.7	2661.6	2644.1	2591.6
25.5°	2497.0	2525.6	2578.5	2634.4	2634.4	2651.4	2656.7	2656.2	2645.0	2626.6	2572.7
26°	2464.9	2506.7	2558.6	2616.9	2608.1	2633.4	2638.2	2638.7	2628.5	2608.6	2552.3
26.5°	2434.8	2488.7	2538.7	2598.9	2585.8	2616.4	2619.8	2620.3	2598.9	2590.2	2532.4
27°	2389.7	2465.9	2518.3	2580.0	2560.1	2600.4	2600.9	2601.8	2576.1	2570.8	2512.0
27.5°	2342.1	2430.9	2497.4	2563.5	2530.9	2578.0	2581.9	2584.8	2550.9	2553.3	2491.1
28°	2295.0	2402.8	2476.1	2545.0	2498.4	2551.3	2561.5	2560.6	2521.7	2531.4	2469.8
28.5°	2249.4	2364.4	2454.7	2517.4	2464.9	2529.0	2542.1	2532.4	2490.7	2502.8	2448.9
29°	2205.2	2318.8	2433.4	2492.6	2428.5	2501.3	2522.2	2510.1	2456.7	2479.0	2426.6
29.5°	2162.4	2272.7	2412.0	2467.8	2389.7	2471.2	2501.8	2482.9	2420.7	2452.8	2405.2
30°	2119.7	2226.5	2389.7	2439.2	2346.9	2439.7	2480.9	2452.3	2381.9	2423.2	2382.9
30.5°	2078.0	2181.4	2367.8	2408.1	2301.3	2406.2	2460.6	2420.7	2340.6	2391.1	2360.5
31°	2036.2	2137.2	2345.5	2374.1	2254.2	2369.3	2439.7	2387.2	2296.0	2358.1	2338.2
31.5°	1993.5	2095.4	2322.7	2339.7	2204.7	2332.4	2418.3	2350.8	2247.4	2322.2	2315.9
32°	1946.9	2053.2	2300.8	2302.3	2154.7	2291.6	2396.5	2312.0	2197.4	2284.8	2293.1
32.5°	1901.7	2012.4	2277.5	2262.9	2103.7	2246.9	2375.1	2271.7	2147.4	2243.5	2269.7
33°	1852.7	1970.2	2256.2	2219.3	2053.2	2200.8	2352.8	2227.5	2097.4	2200.8	2246.9
33.5°	1801.2	1927.9	2235.3	2176.5	2003.7	2152.7	2331.9	2181.4	2045.9	2154.7	2224.1
34°	1747.3	1882.8	2213.9	2129.9	1955.1	2103.7	2311.0	2133.3	1995.4	2107.6	2204.2
34.5°	1696.8	1837.2	2179.9	2080.9	1907.6	2054.7	2283.8	2083.8	1947.4	2059.0	2178.5
35°	1644.9	1789.6	2141.6	2031.8	1860.5	2005.6	2248.9	2033.3	1900.8	2008.5	2140.1
35.5°	1595.9	1739.6	2108.6	1983.3	1813.9	1957.1	2218.3	1985.7	1855.1	1960.0	2105.2
36°	1547.3	1688.1	2066.8	1935.2	1767.2	1910.0	2187.7	1937.2	1808.0	1912.4	2073.1
36.5°	1501.7	1637.1	2019.2	1887.7	1719.7	1862.9	2150.8	1889.6	1760.0	1864.8	2030.4
37°	1455.6	1587.1	1970.7	1839.6	1671.1	1816.3	2112.9	1842.5	1714.3	1818.2	1982.3
37.5°	1410.9	1541.0	1920.2	1793.9	1621.6	1771.6	2072.6	1797.3	1665.3	1773.6	1933.8
38°	1366.2	1492.4	1870.7	1748.3	1571.1	1724.5	2029.9	1751.2	1615.3	1727.9	1884.3
38.5°	1321.1	1447.8	1820.7	1703.2	1521.1	1678.9	1986.7	1707.0	1563.8	1683.7	1832.8
39°	1274.5	1403.6	1771.6	1658.0	1472.1	1632.8	1939.1	1659.9	1513.3	1638.6	1782.8
39.5°	1227.4	1360.4	1722.1	1611.9	1422.1	1584.7	1890.1	1613.3	1463.8	1593.4	1730.8
40°	1179.8	1314.8	1670.6	1566.7	1372.0	1537.1	1838.6	1564.8	1413.3	1546.8	1678.9
40.5°	1133.2	1272.0	1619.2	1520.1	1324.0	1488.6	1785.7	1516.7	1364.8	1498.8	1625.5
41°	1087.5	1227.4	1566.7	1472.5	1278.3	1439.5	1729.9	1467.2	1316.7	1450.7	1573.0
41.5°	1043.8	1183.2	1515.3	1425.4	1231.2	1392.4	1673.1	1418.7	1271.5	1403.1	1520.6
42°	1000.1	1138.0	1462.3	1377.9	1185.6	1345.8	1615.8	1370.6	1224.9	1356.0	1467.7
42.5°	959.4	1093.8	1409.4	1331.3	1140.0	1299.2	1559.0	1322.5	1179.8	1310.4	1415.7
43°	919.1	1049.7	1356.0	1285.1	1094.3	1253.1	1504.1	1276.9	1135.6	1264.7	1365.2
43.5°	879.7	1006.9	1303.1	1241.0	1049.7	1208.4	1449.2	1231.7	1090.0	1221.1	1311.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	765.6	886.5	1152.1	1110.4	919.1	1077.8	1292.9	1099.7	956.0	1092.9	1163.8
45.5°	730.2	848.7	1104.0	1068.6	876.3	1033.2	1244.8	1057.4	913.7	1052.6	1115.7
46°	696.2	811.3	1058.9	1026.8	835.6	991.4	1197.7	1013.7	871.5	1009.9	1070.1
46.5°	663.7	774.9	1015.2	985.6	795.3	950.6	1149.7	971.0	831.2	968.1	1024.9
47°	632.1	739.4	973.0	944.8	757.4	908.9	1104.0	928.3	792.3	927.3	982.2
47.5°	604.0	705.0	931.7	904.5	720.5	869.1	1058.4	886.5	755.0	887.5	939.9
48°	577.8	671.9	890.4	864.7	685.1	829.7	1012.3	847.2	718.6	848.2	898.2
48.5°	554.0	639.9	850.6	824.9	652.0	790.4	969.1	808.4	684.6	810.3	857.9
49°	532.1	609.8	812.7	787.5	619.5	753.5	923.9	771.0	650.6	773.4	819.1
49.5°	511.2	582.1	775.8	751.6	588.9	716.1	880.7	733.1	619.0	738.5	781.7
50°	492.3	555.4	739.4	716.6	559.3	681.7	839.4	698.6	587.9	703.5	745.7
50.5°	475.3	531.1	704.0	682.6	530.7	647.2	798.7	663.7	558.3	670.5	709.8
51°	459.3	509.3	670.5	651.1	504.0	615.1	760.3	631.2	530.7	638.4	676.8
51.5°	443.8	488.9	638.4	619.0	479.7	584.6	722.9	600.1	504.9	608.3	644.8
52°	429.2	470.9	607.9	589.4	456.4	555.4	687.5	571.0	480.7	579.2	614.2
52.5°	414.6	453.5	579.7	559.8	437.0	526.8	652.0	540.9	457.3	550.1	585.0
53°	401.0	437.4	552.0	531.6	417.5	500.1	620.0	513.2	436.5	523.9	556.9
53.5°	386.5	422.4	526.3	504.0	398.1	474.3	587.9	487.9	418.0	497.6	530.7
54°	372.9	408.3	501.0	478.7	378.7	450.6	558.3	463.7	400.1	472.9	505.4
54.5°	359.8	394.2	478.2	454.4	359.8	431.1	529.2	440.4	381.6	449.6	482.6
55°	347.6	380.6	456.4	431.6	343.3	411.2	503.0	420.9	363.6	430.6	460.7
55.5°	336.9	367.0	436.0	411.2	330.1	391.8	476.3	402.0	347.1	411.7	439.4
56°	329.2	353.9	416.6	391.3	319.9	371.9	451.5	383.1	333.1	392.8	421.9
56.5°	323.3	340.8	398.6	373.4	313.6	352.5	431.6	364.1	321.4	374.3	403.9
57°	318.0	329.7	382.1	356.4	307.8	336.0	411.2	347.1	313.6	355.4	386.0
57.5°	312.2	319.5	366.1	340.3	302.5	321.4	391.3	331.6	307.8	339.4	368.5
58°	306.8	312.7	352.0	325.3	297.1	309.8	371.4	318.5	302.5	324.8	354.4
58.5°	301.5	306.8	339.4	313.2	291.8	302.5	351.0	307.3	297.1	313.2	340.8
59°	295.7	301.0	327.2	305.4	286.0	296.2	336.0	300.0	291.3	303.9	328.2
59.5°	289.8	295.7	316.6	299.1	280.6	290.8	322.4	293.7	286.0	297.6	317.0
60°	284.0	290.3	306.4	293.2	275.3	285.5	310.2	288.4	280.1	291.8	306.4
60.5°	277.7	284.5	297.1	287.9	269.9	279.7	299.6	282.6	274.8	286.4	296.6
61°	272.4	278.7	288.4	282.1	264.6	274.3	290.3	277.2	269.0	281.1	287.9
61.5°	266.5	272.9	280.1	276.3	259.3	269.0	281.1	271.9	263.1	275.3	279.7
62°	260.7	267.0	272.9	270.9	254.4	263.6	272.9	266.1	257.8	269.9	271.9
62.5°	254.4	260.7	265.1	265.6	249.1	258.3	265.1	260.2	252.5	264.1	264.1
63°	249.1	254.9	258.3	260.2	243.7	252.5	257.8	254.9	246.6	258.3	257.3
63.5°	243.2	249.1	251.5	254.4	238.4	247.1	251.0	249.1	241.3	252.9	251.0
64°	237.4	243.2	245.7	249.1	233.5	241.8	244.2	243.2	236.0	247.1	244.7
64.5°	231.6	237.9	239.8	243.7	228.2	236.4	238.4	237.9	230.1	241.3	238.9
65°	226.2	231.6	234.5	238.4	223.3	231.6	233.0	232.1	224.8	236.0	233.0
65.5°	220.4	225.8	229.2	233.0	218.0	226.2	227.2	226.7	219.4	230.1	227.7
66°	214.6	220.4	223.3	227.7	213.1	220.9	221.9	220.9	214.1	224.8	222.4



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	197.6	202.9	206.8	211.7	198.1	205.4	205.9	204.4	198.1	208.3	206.3
68°	192.3	197.1	201.5	206.3	193.2	200.0	200.0	199.1	192.7	202.9	201.0
68.5°	186.4	191.3	195.7	201.0	187.9	195.2	194.7	193.7	187.4	197.1	195.7
69°	181.1	185.9	190.3	195.7	183.0	189.8	189.3	188.4	182.1	191.8	189.8
69.5°	174.3	180.1	184.5	190.8	178.2	184.5	184.0	182.6	176.7	186.4	184.5
70°	169.0	176.2	179.2	185.5	173.3	179.6	178.2	177.2	171.4	181.1	179.2
70.5°	164.1	170.4	173.3	180.1	168.5	174.8	172.8	171.9	166.5	175.8	173.8
71°	158.8	164.6	168.0	175.8	163.6	169.4	167.5	166.5	161.2	170.4	168.5
71.5°	153.9	158.3	162.6	170.4	158.8	164.1	162.2	161.2	155.8	164.6	163.1
72°	148.1	152.4	157.3	165.6	153.9	159.2	156.8	155.8	150.5	159.2	157.8
72.5°	142.7	146.6	152.0	160.2	149.1	154.4	151.5	150.5	145.7	153.9	152.4
73°	136.9	141.3	146.6	155.4	143.7	149.5	146.1	145.2	140.3	148.6	147.1
73.5°	131.6	135.5	141.3	150.0	138.9	144.2	141.3	139.8	135.0	143.2	141.8
74°	125.7	130.1	135.9	145.2	134.5	139.3	135.9	134.5	130.1	137.9	136.4
74.5°	120.4	124.3	130.1	139.8	129.6	134.5	130.6	129.1	124.8	132.5	131.6
75°	115.1	118.5	124.8	135.0	124.3	129.1	125.7	123.8	119.4	127.2	126.2
75.5°	109.7	113.1	119.4	129.6	119.4	124.3	120.4	118.5	114.6	121.9	120.9
76°	103.9	107.3	114.1	124.8	114.6	119.4	115.1	113.1	109.2	116.5	115.6
76.5°	98.6	102.0	108.8	119.9	110.2	114.6	110.2	107.8	104.4	111.7	110.2
77°	93.2	96.1	103.4	114.6	105.4	109.7	105.4	102.4	99.0	106.3	104.9
77.5°	87.9	90.8	98.1	109.7	100.5	104.9	100.5	97.1	94.2	101.0	100.0
78°	82.5	85.0	93.2	104.4	95.6	99.5	95.2	91.8	89.3	95.6	94.7
78.5°	77.2	79.6	87.9	99.5	90.8	94.7	90.3	86.4	84.0	90.3	89.3
79°	71.9	73.8	83.0	94.2	86.4	89.8	85.4	81.1	79.1	85.0	84.5
79.5°	66.5	68.5	77.7	89.3	81.6	85.0	80.6	75.7	74.3	80.1	79.6
80°	61.2	63.1	72.8	84.5	77.2	80.1	75.7	70.9	69.4	74.8	74.8
80.5°	56.3	57.8	68.0	79.1	72.3	75.3	71.4	65.5	64.6	69.4	69.4
81°	51.0	51.9	63.1	74.3	68.0	70.4	66.5	60.7	59.7	64.1	65.1
81.5°	45.6	46.6	58.3	69.4	63.1	66.0	62.1	56.3	54.9	59.2	60.2
82°	40.3	41.8	53.4	64.6	58.7	61.2	57.3	51.5	49.5	53.9	55.3
82.5°	35.4	36.9	49.0	60.2	54.4	56.8	52.9	47.1	44.7	48.6	51.0
83°	30.1	32.5	44.7	55.3	50.0	51.9	48.6	42.7	40.3	44.2	46.6
83.5°	24.8	27.7	40.3	51.0	45.2	47.6	44.7	38.4	35.4	39.3	42.7
84°	19.9	23.8	35.9	46.1	40.8	42.7	40.3	34.0	30.6	34.5	38.8
84.5°	17.5	19.9	32.0	41.8	36.4	38.4	36.4	30.1	25.7	30.1	35.0
85°	15.1	17.0	28.2	36.9	31.6	34.0	32.0	25.7	20.9	25.2	31.1
85.5°	12.1	14.1	23.8	32.5	27.2	29.1	28.2	21.8	17.5	21.4	26.7
86°	9.7	11.7	19.9	27.7	22.8	24.8	24.3	18.9	14.6	18.4	23.3
86.5°	7.3	9.2	16.5	23.3	18.4	20.4	20.4	16.0	12.6	16.0	19.4
87°	5.3	6.3	12.6	18.9	14.1	16.0	16.5	13.1	10.7	13.6	15.5
87.5°	2.9	3.9	9.2	14.6	9.7	11.7	12.6	10.2	8.3	10.7	11.7
88°	1.0	1.5	5.3	10.7	5.8	7.3	8.7	7.8	6.3	8.3	8.3
88.5°	0.0	0.5	1.9	6.3	1.9	3.4	4.9	4.9	4.4	5.8	4.4



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.0	0.5	0.5



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3050.4	3050.4	3050.4	3050.4	3050.4	3050.4
0.5°	3047.0	3049.5	3049.5	3050.0	3050.4	3050.0
1°	3046.1	3048.0	3047.5	3048.0	3049.0	3048.5
1.5°	3044.1	3046.1	3045.1	3045.6	3046.6	3046.1
2°	3042.2	3044.1	3042.7	3042.7	3043.6	3043.6
2.5°	3039.8	3041.7	3039.8	3039.8	3040.7	3041.2
3°	3036.8	3038.8	3036.4	3036.4	3037.3	3037.8
3.5°	3033.4	3035.9	3033.4	3033.0	3033.9	3034.9
4°	3030.1	3032.0	3029.6	3029.1	3030.1	3031.5
4.5°	3026.2	3028.6	3025.2	3024.7	3025.7	3027.1
5°	3021.8	3024.2	3020.3	3020.3	3021.3	3022.8
5.5°	3017.4	3019.9	3015.5	3015.0	3016.5	3018.4
6°	3012.6	3014.5	3010.1	3009.7	3011.1	3013.5
6.5°	3007.2	3009.2	3004.8	3004.3	3005.3	3008.2
7°	3001.4	3003.3	2998.5	2998.0	2999.5	3001.9
7.5°	2995.1	2997.5	2992.2	2991.7	2992.7	2995.6
8°	2988.8	2990.7	2985.4	2984.9	2986.4	2989.3
8.5°	2982.0	2983.9	2978.1	2977.6	2979.1	2982.0
9°	2975.2	2976.6	2970.8	2969.8	2971.3	2974.7
9.5°	2967.4	2968.9	2963.1	2962.1	2963.5	2966.9
10°	2959.2	2961.6	2954.8	2953.3	2955.3	2958.7
10.5°	2950.9	2953.3	2946.1	2945.1	2946.1	2949.9
11°	2942.2	2944.1	2937.3	2935.9	2937.3	2941.2
11.5°	2933.4	2934.9	2927.6	2926.2	2928.1	2932.0
12°	2923.7	2925.7	2917.9	2916.4	2917.9	2921.8
12.5°	2914.0	2915.5	2907.7	2906.2	2907.2	2911.6
13°	2903.8	2905.3	2897.0	2895.6	2897.0	2900.9
13.5°	2892.7	2894.6	2886.3	2884.9	2885.9	2890.2
14°	2882.0	2883.4	2874.7	2873.2	2874.7	2879.1
14.5°	2870.3	2871.8	2863.0	2861.1	2862.1	2866.9
15°	2858.7	2859.6	2850.9	2849.0	2849.4	2854.3
15.5°	2846.0	2847.0	2837.8	2836.3	2836.3	2841.2
16°	2833.4	2834.4	2824.7	2823.2	2823.7	2828.1
16.5°	2819.8	2821.3	2811.6	2809.6	2810.1	2814.0
17°	2806.2	2807.2	2798.0	2796.0	2796.0	2799.9
17.5°	2792.2	2793.1	2783.4	2781.5	2781.0	2784.9
18°	2778.1	2778.1	2768.8	2766.9	2766.4	2770.3
18.5°	2762.5	2763.0	2753.3	2752.3	2750.9	2754.3
19°	2747.5	2748.0	2737.8	2736.3	2734.9	2738.7
19.5°	2731.9	2731.9	2721.8	2720.8	2718.8	2722.2
20°	2715.4	2715.9	2705.2	2704.3	2701.8	2705.7
20.5°	2698.9	2699.4	2688.7	2686.8	2684.9	2689.2
21°	2681.9	2682.4	2671.3	2670.3	2667.4	2672.2



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2629.0	2630.0	2617.4	2614.9	2613.0	2617.9
23°	2610.6	2611.5	2598.9	2596.5	2594.6	2599.4
23.5°	2592.6	2592.6	2580.5	2576.1	2575.6	2581.0
24°	2573.7	2574.2	2561.1	2556.7	2556.2	2561.1
24.5°	2554.3	2554.7	2541.1	2536.3	2536.3	2544.1
25°	2534.3	2536.3	2521.7	2515.9	2515.9	2526.1
25.5°	2514.9	2519.3	2501.3	2494.1	2496.5	2497.0
26°	2495.5	2496.5	2480.9	2474.1	2475.6	2464.9
26.5°	2478.0	2462.0	2461.0	2451.3	2457.6	2434.8
27°	2458.1	2435.3	2443.1	2430.4	2438.2	2389.7
27.5°	2426.6	2397.4	2421.7	2407.6	2407.6	2342.1
28°	2395.0	2351.8	2389.7	2385.3	2376.1	2295.0
28.5°	2364.9	2305.7	2358.6	2362.5	2344.5	2249.4
29°	2323.2	2260.5	2328.5	2340.1	2301.3	2205.2
29.5°	2278.0	2215.4	2285.8	2315.9	2255.7	2162.4
30°	2232.8	2172.2	2242.1	2293.5	2208.6	2119.7
30.5°	2188.7	2127.5	2195.5	2270.2	2164.4	2078.0
31°	2145.5	2084.8	2152.3	2246.9	2120.2	2036.2
31.5°	2101.3	2041.6	2107.6	2223.1	2077.0	1993.5
32°	2058.6	1997.9	2065.3	2199.3	2035.7	1946.9
32.5°	2015.8	1952.2	2023.6	2176.0	1995.9	1901.7
33°	1973.6	1906.1	1981.4	2153.7	1954.7	1852.7
33.5°	1930.4	1858.0	1939.1	2133.8	1914.8	1801.2
34°	1885.2	1808.5	1897.4	2112.0	1872.6	1747.3
34.5°	1840.1	1758.5	1853.2	2076.0	1829.4	1696.8
35°	1793.9	1707.5	1808.0	2033.3	1782.8	1644.9
35.5°	1745.9	1656.6	1762.4	2001.3	1737.1	1595.9
36°	1697.3	1608.0	1714.3	1955.1	1687.6	1547.3
36.5°	1647.8	1559.0	1667.2	1897.8	1639.6	1501.7
37°	1599.3	1512.8	1618.7	1840.6	1589.1	1455.6
37.5°	1551.2	1466.2	1571.1	1783.8	1542.0	1410.9
38°	1504.6	1420.6	1523.0	1727.4	1495.4	1366.2
38.5°	1459.4	1375.4	1478.4	1673.5	1450.7	1321.1
39°	1413.3	1331.3	1432.7	1621.1	1407.0	1274.5
39.5°	1369.1	1284.7	1390.5	1570.6	1364.3	1227.4
40°	1325.9	1238.0	1346.8	1522.1	1322.5	1179.8
40.5°	1283.7	1192.9	1303.6	1475.5	1280.8	1133.2
41°	1239.0	1146.8	1260.9	1429.8	1238.5	1087.5
41.5°	1195.3	1101.6	1218.6	1384.2	1194.8	1043.8
42°	1151.1	1057.4	1174.9	1339.5	1151.6	1000.1
42.5°	1108.4	1014.7	1131.2	1296.3	1108.9	959.4
43°	1064.7	972.5	1088.5	1251.6	1065.7	919.1
43.5°	1021.5	931.7	1045.3	1206.0	1023.4	879.7

TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	901.1	815.2	923.4	1069.6	904.0	765.6
45.5°	864.2	778.3	886.1	1026.4	867.1	730.2
46°	825.8	741.9	848.7	984.6	830.2	696.2
46.5°	789.4	706.4	811.3	943.3	794.3	663.7
47°	754.0	672.9	775.8	904.5	759.3	632.1
47.5°	719.5	639.9	739.4	867.6	725.3	604.0
48°	685.1	610.8	705.0	832.6	691.8	577.8
48.5°	653.0	581.6	672.4	799.1	659.8	554.0
49°	621.0	555.9	640.9	765.6	629.2	532.1
49.5°	591.8	532.1	610.8	734.1	600.6	511.2
50°	562.7	509.8	582.1	703.0	573.9	492.3
50.5°	537.0	489.4	555.9	672.9	548.6	475.3
51°	512.7	471.4	530.7	643.8	525.8	459.3
51.5°	490.4	454.4	508.8	615.1	504.4	443.8
52°	470.0	438.9	488.9	587.9	485.0	429.2
52.5°	451.5	423.8	469.5	561.7	467.1	414.6
53°	434.5	409.3	452.0	537.0	450.1	401.0
53.5°	420.0	395.2	435.5	513.2	434.0	386.5
54°	405.9	381.1	419.5	490.8	419.0	372.9
54.5°	391.8	368.0	405.9	469.5	404.4	359.8
55°	377.2	354.9	391.3	449.6	391.3	347.6
55.5°	363.2	342.3	377.2	430.6	377.2	336.9
56°	350.5	331.6	364.1	413.2	364.1	329.2
56.5°	337.4	322.9	351.0	396.7	351.0	323.3
57°	325.8	316.1	338.4	380.6	338.9	318.0
57.5°	315.6	310.7	326.7	366.1	327.7	312.2
58°	306.8	304.9	317.0	352.5	318.5	306.8
58.5°	300.5	299.6	309.3	339.9	311.2	301.5
59°	295.2	294.2	303.4	328.2	305.9	295.7
59.5°	289.8	289.4	297.6	316.6	300.0	289.8
60°	284.5	283.5	292.3	306.8	294.7	284.0
60.5°	279.2	278.7	286.9	297.6	288.4	277.7
61°	273.3	273.3	281.1	288.9	283.1	272.4
61.5°	268.0	268.0	275.8	280.6	277.2	266.5
62°	262.7	262.7	270.4	272.9	271.4	260.7
62.5°	257.3	257.3	264.6	265.6	265.1	254.4
63°	252.0	252.5	259.3	258.8	259.3	249.1
63.5°	246.6	247.1	253.9	252.5	253.4	243.2
64°	241.3	242.3	248.6	246.2	247.6	237.4
64.5°	236.0	236.9	242.8	240.8	241.8	231.6
65°	231.1	231.6	237.9	235.5	236.0	226.2
65.5°	225.8	226.7	232.6	229.6	230.1	220.4
66°	220.4	221.4	226.7	224.3	224.3	214.6



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	204.9	206.3	211.2	208.3	206.8	197.6
68°	199.5	201.5	205.9	202.5	201.0	192.3
68.5°	194.7	196.1	200.5	196.6	195.2	186.4
69°	189.3	191.3	195.2	191.3	189.8	181.1
69.5°	184.0	186.4	189.8	185.5	184.0	174.3
70°	179.2	181.6	184.5	180.1	178.2	169.0
70.5°	173.8	175.8	179.6	175.3	172.8	164.1
71°	169.0	170.9	176.2	169.9	167.0	158.8
71.5°	163.6	166.5	170.9	164.1	161.7	153.9
72°	158.8	161.7	165.1	158.8	156.3	148.1
72.5°	153.4	156.8	159.7	153.4	150.5	142.7
73°	148.6	152.4	154.4	148.1	144.7	136.9
73.5°	143.7	147.1	149.1	142.3	139.3	131.6
74°	138.4	142.3	144.2	136.9	133.5	125.7
74.5°	133.5	137.4	138.9	131.6	127.7	120.4
75°	128.2	132.5	133.5	126.2	122.3	115.1
75.5°	123.3	127.7	128.7	120.9	116.5	109.7
76°	118.0	122.8	123.3	115.1	111.2	103.9
76.5°	113.1	117.5	118.5	109.7	105.4	98.6
77°	108.3	112.6	113.1	104.9	99.5	93.2
77.5°	102.9	107.8	108.3	99.5	94.2	87.9
78°	98.1	102.9	102.9	94.2	88.4	82.5
78.5°	92.7	98.1	98.1	88.8	83.0	77.2
79°	87.9	93.2	92.7	84.0	77.2	71.9
79.5°	83.0	88.4	87.9	78.7	71.9	66.5
80°	77.7	83.5	82.5	73.8	66.0	61.2
80.5°	72.8	78.7	77.7	68.9	60.7	56.3
81°	68.0	74.3	72.8	64.1	55.3	51.0
81.5°	63.6	69.4	68.0	59.2	50.5	45.6
82°	58.7	64.6	63.1	54.4	45.2	40.3
82.5°	53.9	60.2	58.3	50.0	40.8	35.4
83°	49.5	55.3	53.4	45.6	35.9	30.1
83.5°	44.7	50.5	48.6	41.3	31.6	24.8
84°	40.3	46.1	43.7	36.9	27.2	19.9
84.5°	35.4	41.8	39.3	33.0	23.3	17.5
85°	31.1	36.9	34.5	28.6	19.9	15.1
85.5°	26.2	32.5	29.6	24.8	17.0	12.1
86°	21.8	27.7	24.8	20.4	14.1	9.7
86.5°	17.0	23.3	20.4	16.5	11.2	7.3
87°	12.6	18.4	16.0	12.6	8.3	5.3
87.5°	8.3	14.6	12.1	9.2	5.3	2.9
88°	4.4	10.2	8.3	5.3	2.4	1.0
88.5°	1.5	5.8	4.4	1.5	1.0	0.0



TEST NUMBER: P776644

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.5	0.5	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2654.3	2673.7	2722.7	2764.5	2762.1	2778.1	2787.8	2783.4	2773.2	2756.7	2716.4
22°	2635.8	2656.2	2706.2	2748.9	2747.5	2763.0	2772.7	2768.8	2758.7	2742.1	2699.4



44°	841.4	964.2	1250.7	1195.3	1005.0	1163.8	1394.4	1187.1	1043.8	1176.4	1260.4
44.5°	803.0	925.4	1201.1	1152.1	961.8	1120.6	1343.9	1144.3	1000.1	1135.6	1210.9



66.5°	209.3	214.6	218.0	222.4	207.8	215.6	216.5	215.6	208.8	219.4	217.0
67°	203.4	208.8	212.7	217.0	202.9	210.2	211.2	210.2	203.4	213.6	211.7



89°	0.0	0.5	0.5	2.4	0.5	1.0	1.9	2.4	2.4	3.4	1.9
89.5°	0.0	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	1.5	0.5

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21.5°	2664.9	2665.4	2653.8	2651.8	2649.4	2654.3
22°	2647.5	2647.5	2635.8	2633.9	2631.4	2635.8



44°	980.7	891.9	1004.0	1159.9	981.7	841.4
44.5°	941.4	853.0	964.2	1114.7	942.9	803.0



66.5°	215.1	216.5	221.9	219.0	218.5	209.3
67°	210.2	211.7	216.5	213.6	212.7	203.4

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Scaled Data Report



89°	0.5	1.9	1.0	0.5	0.5	0.0
89.5°	0.0	0.5	0.5	0.5	0.5	0.0

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)